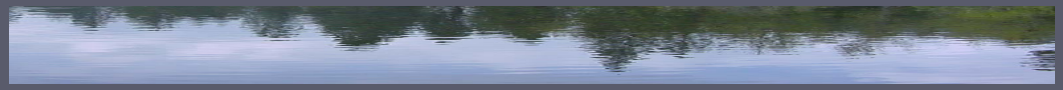
YN Perspective on Salmonid Management in the Mid-Columbia

Prepared for

USFWS Review Team

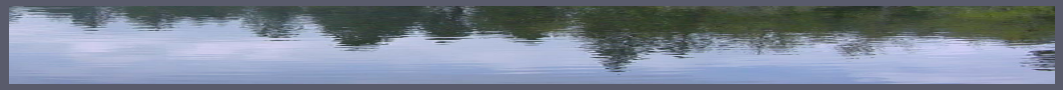
14 April 2006

YN Fisheries Management Priorities



- Gravel-to-Gravel Approach
  - Prioritizes natural fish in the natural habitats
  - Adaptive management framework.
  - Focus on the tributary, mainstem, estuary, and ocean ecosystems and habitats where anadromous salmonids live

Harvest Management



- Columbia River treaty tribes discontinued commercial fishing for summer chinook (1964 – 2003) and for spring chinook (1977-1999)
- Ceremonial and subsistence fishing was reduced
- During this time period John Day, Wells and Snake River dams were constructed, further reducing the numbers available for harvest

Role of Hatchery Facilities in the Mid-Columbia

- Mitigation Facilities
- Supplementation
- Restoration

Mitigation Facilities

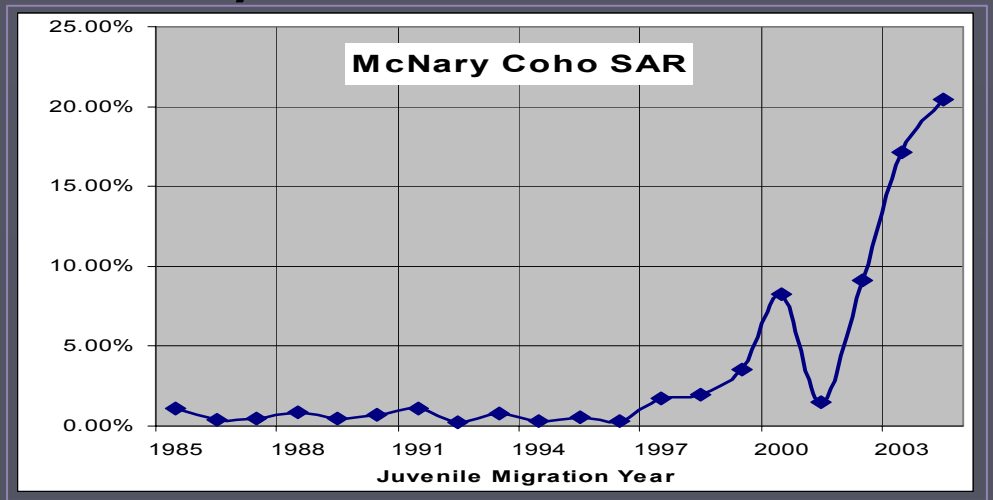
- USFWS Hatchery Facilities
  - Mitigation for lost wild fish and lost fishing opportunity
- Supports highest priority tribal fisheries

Supplementation of Naturally Producing Populations

- Hatchery supplementation of natural production in the Mid-Columbia
  - Increased mortality schedule
  - Need for continued artificial production
  - Emphasis on abundance and productivity vs. genetic diversity and spatial structure

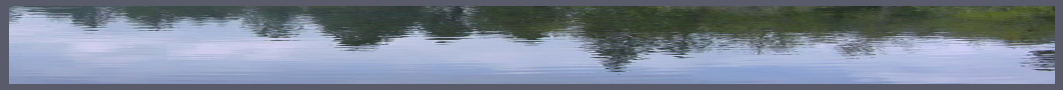
Restoration of Extirpated Populations

- Important role in the restoration of extirpated species
- Example: Coho Restoration Program
  - Development of a local broodstock
  - Naturalization of hatchery fish



Overview of Coho Reintroduction in Mid-Columbia Tributaries

Long-Term Vision

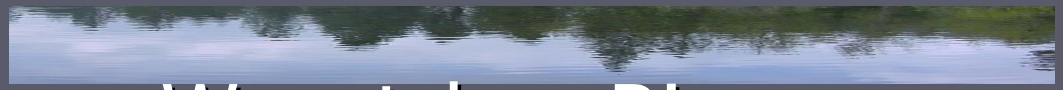


To re-establish naturally spawning coho populations at biologically sustainable levels which provide significant harvest in most years.

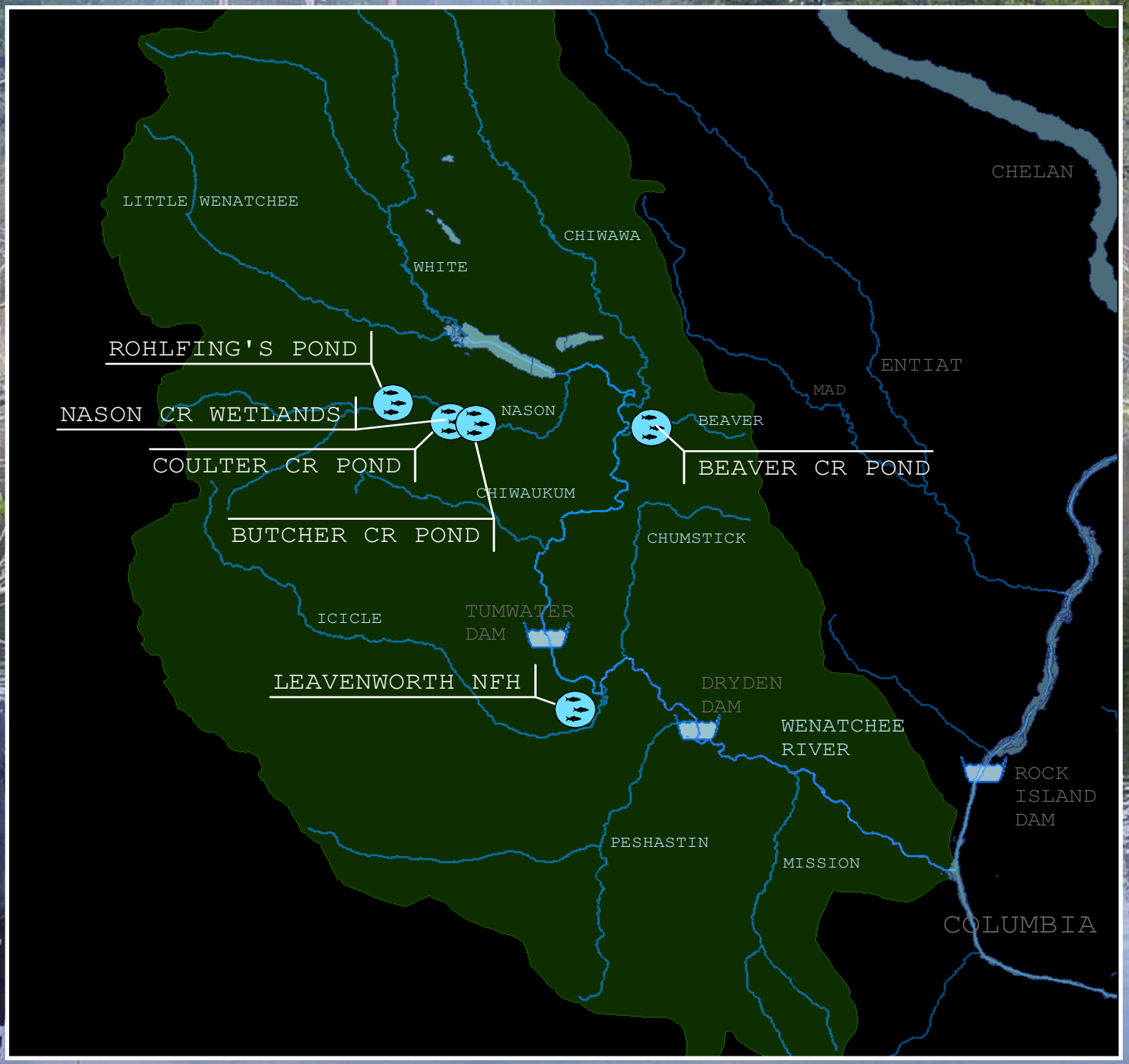
Feasibility Study Goals

- Determine whether a broodstock can be developed from lower Columbia River stocks
- Initiate natural production

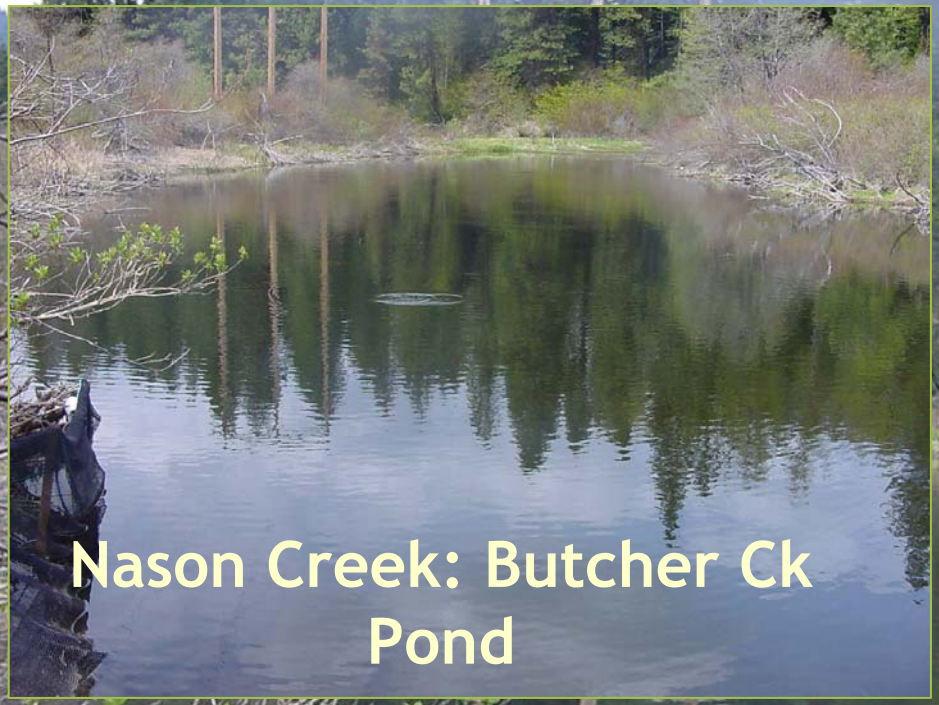
Acclimated Releases

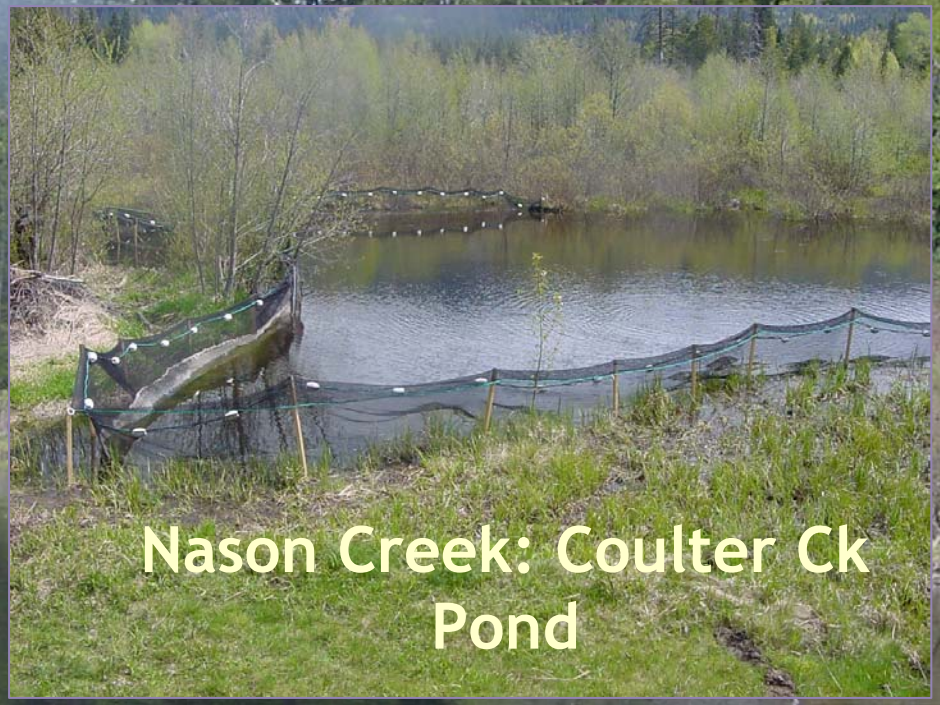


- Wenatchee River
  - Icicle Creek
    - Primary broodstock development site
  - Nason and Beaver Creeks
    - Species interaction
    - Natural production
- Methow River
  - Winthrop NFH
    - Broodstock development
  - Wells FH (2006)
    - Broodstock development

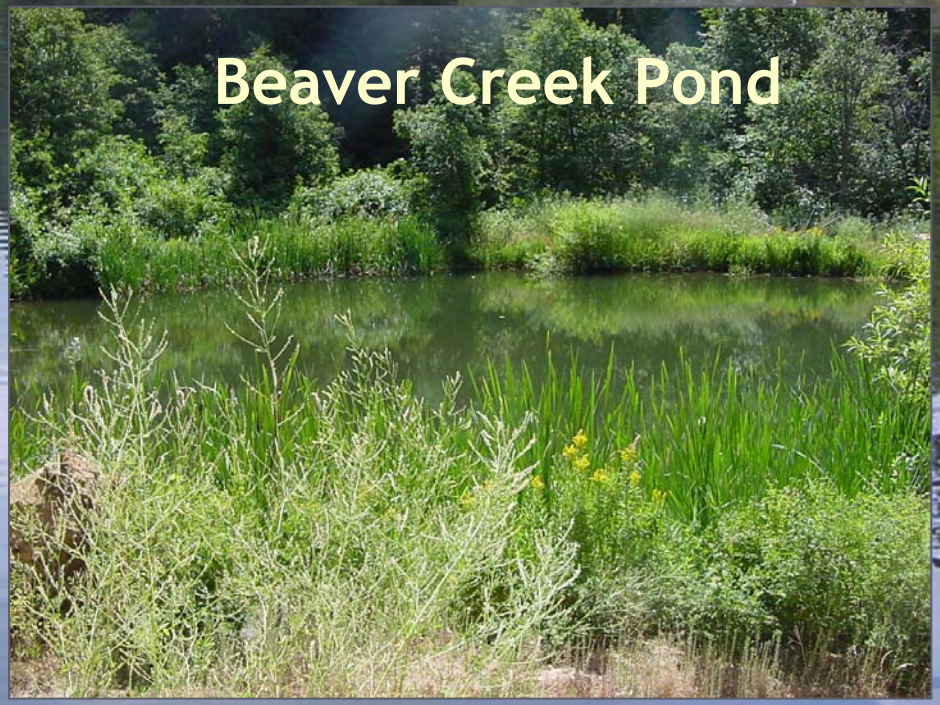

LITTLE WENATCHEE
CHIWAWA
WHITE
CHELAN
ROHLFING'S POND
ENTIAT
MAD
NASON CR WETLANDS
NASON
BEAVER
COULTER CR POND
BEAVER CR POND
CHIWAUKUM
BUTCHER CR POND
CHUMSTICK
ICICLE
TUMWATER DAM
LEAVENWORTH NFH
DRYDEN DAM
WENATCHEE RIVER
ROCK ISLAND DAM
PESHASTIN
MISSION
COLUMBIA


Leavenworth NFH
Small Foster Lucas Pond


Nason Creek: Butcher Ck Pond


Nason Creek: Coulter Ck Pond


Nason Creek: Mahar Pond

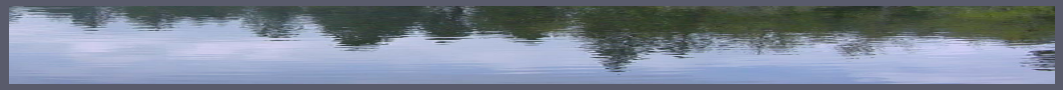

Beaver Creek Pond

Broodstock Collection and Spawning

- Broodstock Collection
  - Wenatchee
    - Dryden Dam
    - Tumwater Dam
    - Dam 5 (LNFH)
  - Methow
    - Wells Dam
    - Winthrop NFH
- Spawning
  - Wenatchee: Entiat NFH
  - Methow: Winthrop NFH

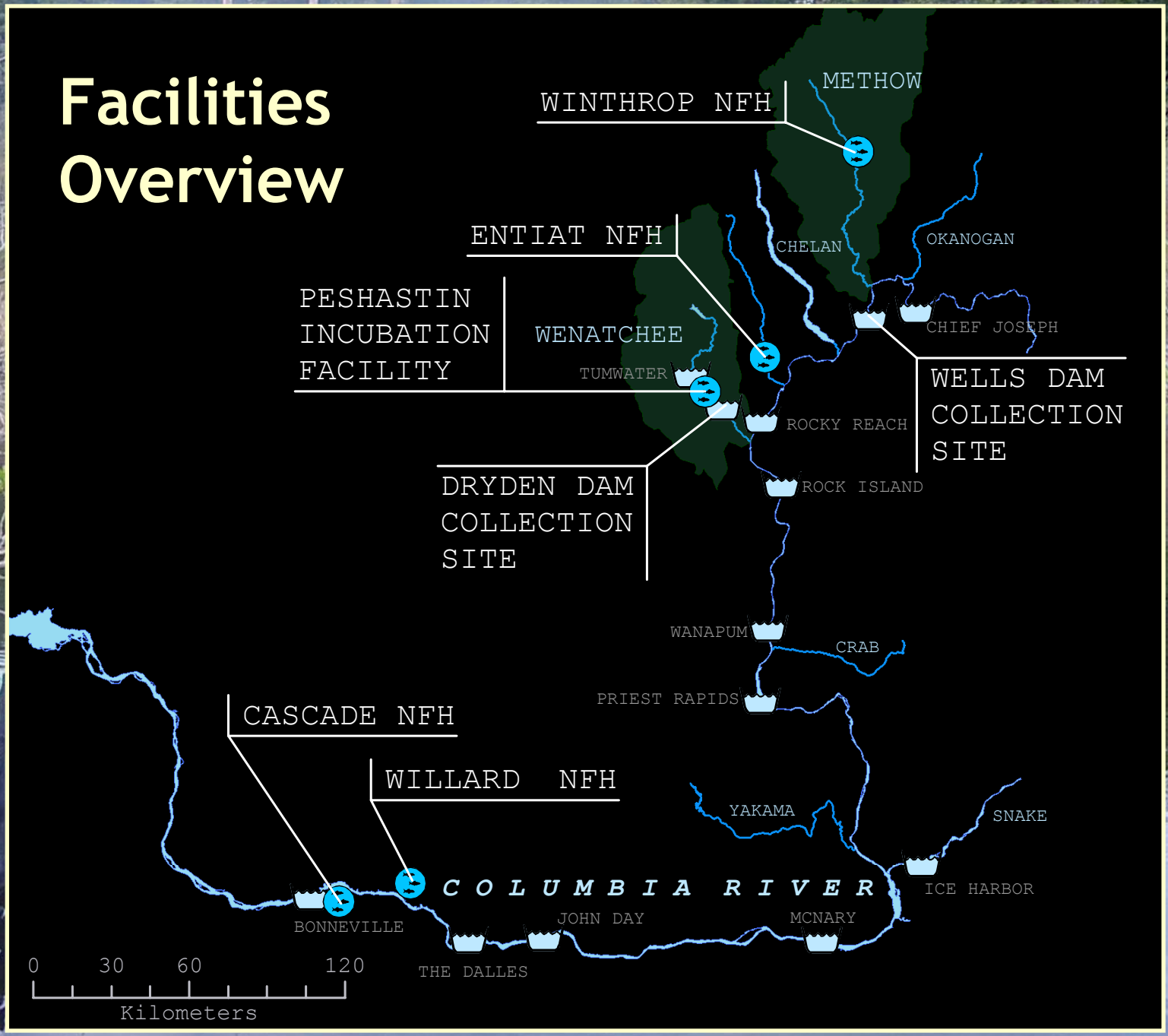
ENFH Spawning

Incubation and Rearing



- Incubation
  - Wenatchee
    - Peshastin Incubation Facility
    - Entiat NFH
  - Methow
    - WNFH
- Rearing
  - Winthrop NFH (250K)
  - Cascade FH (700K)
  - Willard NFH (500K)

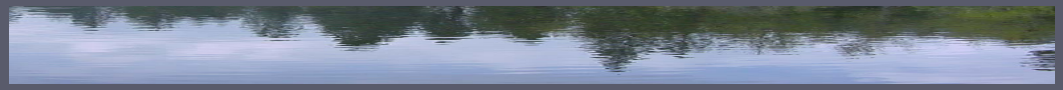
Facilities Overview



Summary of Results To-Date

Feasibility Phase

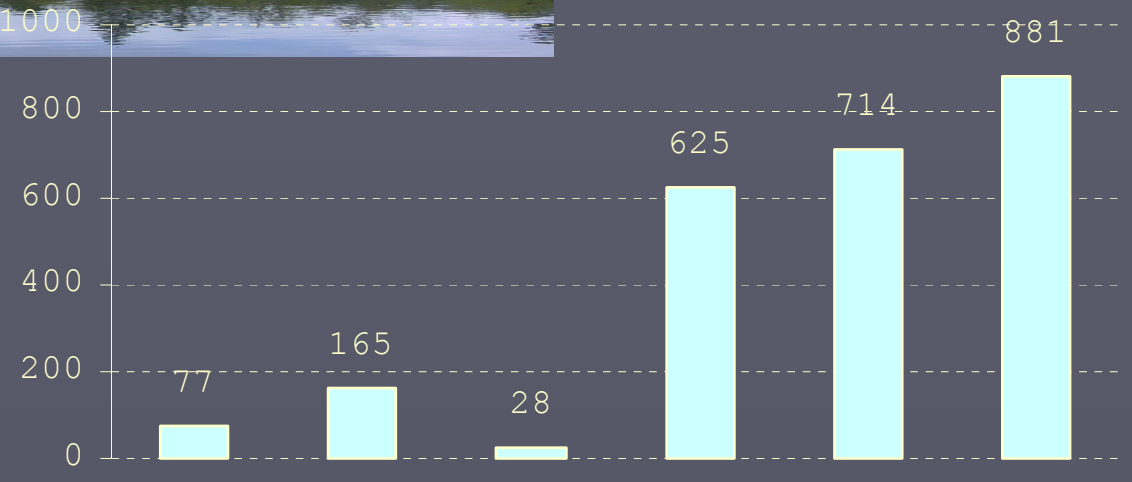
Broodstock Development: Wenatchee



The Development of a Local Broodstock

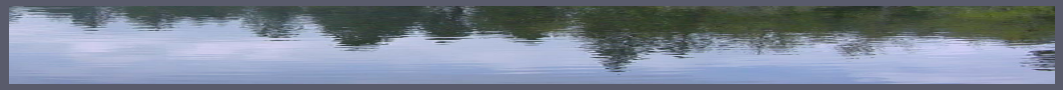
1999: LCR	2000: LCR	2001: LCR
2002: MCR 1st Generation	2003: MCR 1st Generation	2004: LCR & MCR
2005:MCR 2nd Generation	2006 MCR 2nd Generation	2007 MCR 1st & 2nd Generation

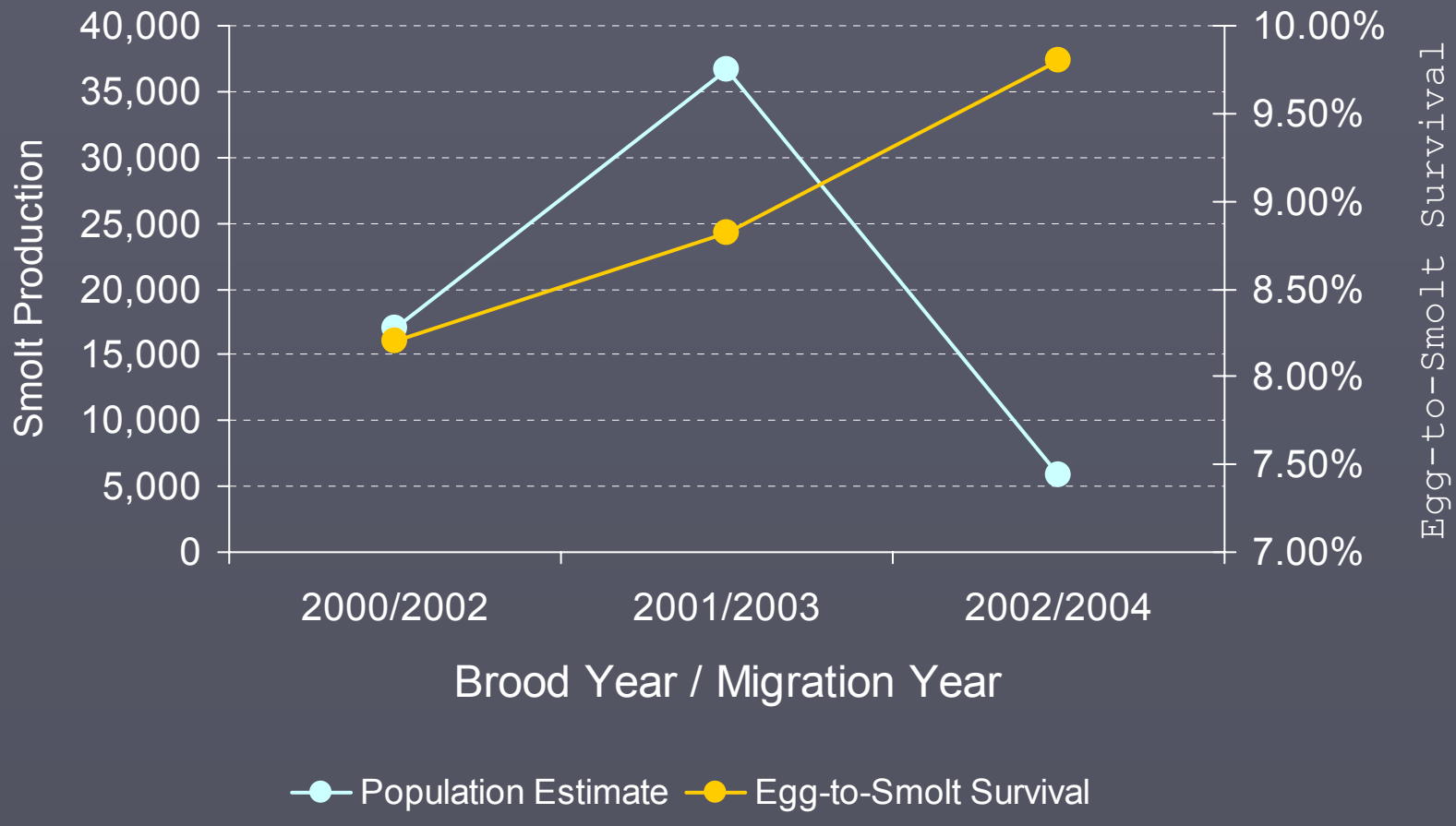
Natural Production
Wenatchee River Redd Counts



	2000	2001	2002	2003	2004	2005
Icicle Creek	74	151	21	507	504	589
Nason Creek	3	3	1	6	35	41
Peshastin Creek	na	na	1	13	33	25
Mission Creek	na	na	na	24	21	17
Wenatchee River	na	11	5	75	121	209

Wenatchee Coho Natural Production



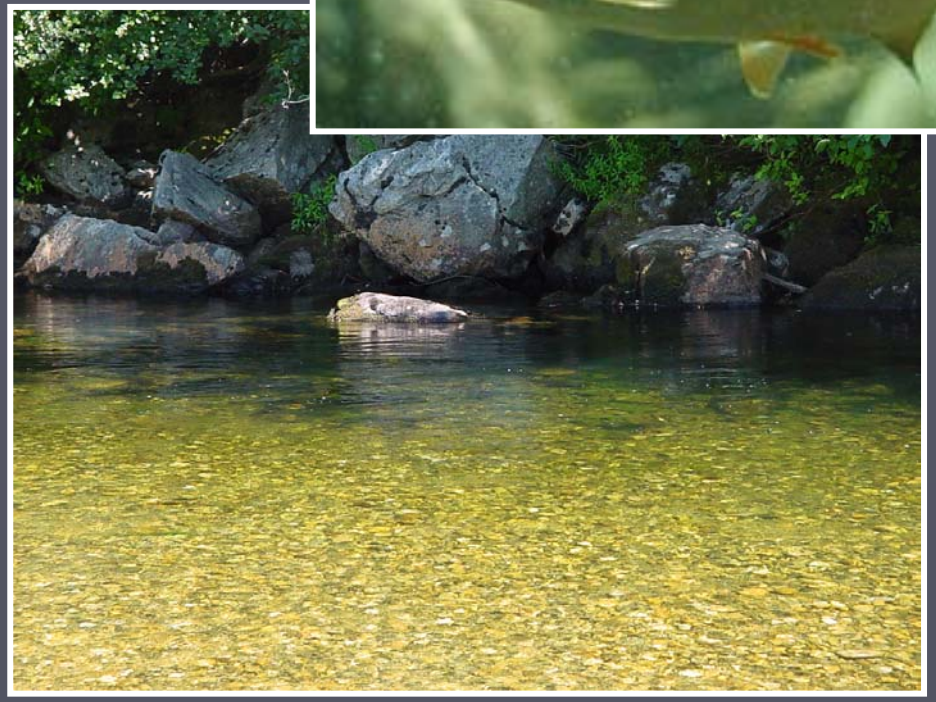


Species Interactions

- Predation
- Redd superimposition
- Residualism
- Competition

Where do we go from here?

- Coho Master Plan
  - Submitted January 2006
- 2007-2009 Solicitation
- ISRP Review



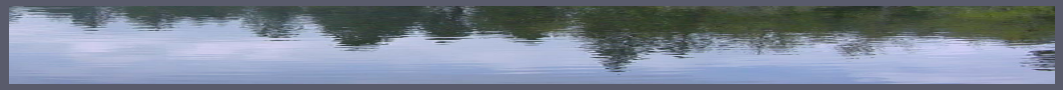
Master Plan for Coho Restoration

- Phased approach
- Natural Production Phases
  - Local adaptation is emphasized
  - Loss of fitness is address through AHA

Master Plan for Coho Restoration

- Habitat Improvement
- M&E Plan
  - Project performance indicators
  - Adaptability to local conditions
  - NTTOC monitoring
- Timeline through 2026

Proposed Master Plan



- Designed to meet tribal restoration goals
- Minimize impacts to species and to the environment
- Meet legal and policy mandates
- Meet NPCC principles, objectives and strategies

  "experimental adaptive management approach that includes an aggressive program to evaluate the risks and benefits and addresses scientific uncertainties." (NPCC 2000)
- Help achieve the visions of the Wenatchee and Methow Subbasin Plans.

  " the goal for coho salmon includes re-establishment of run sizes that provide for species recovery"